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ABSTRACT

Recent studies of the self-concept of academic ability, described by W. B. Brookover in 1959, are reviewed. The self-concept of academic ability is defined as the individual's assessment of his or her ability to learn in the school context in comparison to relevant others in the school. A scale--the Self-Concept of Academic Ability Scale--was developed in 1964 by Brookover. Because it is postulated that self-concept of academic ability is a function of the perceived evaluations of significant others, which may change with time and the identification of relevant others, changes in scores are to be expected. The current examination concerns the nature of self-concept of academic ability as it relates to a characteristic of schools--the degree of differentiation of school programs. This is the degree to which the school differentiates among students through grouping or practices based on the presumed ability to learn. Data from three samples of Michigan elementary schools (statewide sample, 68 schools; predominantly black sample, 30 schools; and a predominantly white sample) revealed a negative relationship between school differentiation and the variance in self-concept within each school. It may be that those in lower groups assess themselves relatively higher than if they were in heterogeneous groups. Results suggest that self-concept of academic ability is not a constant, but varies with the situation and expectations. Two forms of the self-concept scale are attached. (SLD)

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THE SELF-CONCEPT OF ACADEMIC ABILITY SCALE - A REVIEW AND FURTHER ANALYSIS

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Perhaps a brief resume of the development and history of the self-concept of ability theory and scale may be relevant prior to presentation of our most recent examination of the concept. The first edition of my Sociology of Education published in 1955 contains no mention or discussion of self-concept of ability (Brookover 1955). The importance of student role expectations in the school was, however, discussed in some length. In 1959 I published a paper outlining "a social-psychological conception of classroom learning" (Brookover 1959) in which we hypothesized that self-concept of ability was a functionally limiting factor in school learning. In 1959 or 1960 we undertook the first phase of our study of self-concept of academic ability and school achievement (Brookover et al. 1962). The learning theory that undergirded that study was more fully developed for this research and reported in the second edition of our Sociology of Education in 1964 (Brookover and Gottlieb 1964). This study required the development of a scale designed to measure what we perceived self-concept of ability to be.

The short report of that research in Sociology of Education (Brookover et al. 1964) has been cited in over 175 publications. (Brookover 1987) When I ceased counting several years ago, over two hundred researchers had requested permission to use the Self-Concept of Academic Ability Scale in their research. That number has continued to increase almost every month to the present time. The original scale was designed for junior high school and high school age students. It has subsequently been modified slightly for use with younger students. A post-high school form has also

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been developed. I have not attempted to examine how these scales have been used in the hundreds of research projects. Conversations with many users, however, indicate some false assumptions are made about self-concept. The most common is that it measures a fixed or constant characteristic of individual students.

The nature of self-concept of academic ability is probably best understood by an appraisal of the scale which we developed to measure it. Both the original and the elementary forms are attached. We simply describe self-concept as the individual's assessment of his or her ability to learn in the school context. This assessment is made in comparison to relevant others in the school. We hypothesize that this conception is acquired in interaction with significant others. It is perceived as a necessary but not sufficient condition for learning. Our research and theory both postulate that self-concept of academic ability may vary from time to time with the individual's perception of what significant others thinks he or she is able to learn.

A few significant findings suggest its predictive validity. In our early study self-concept of academic ability as measured by the scale correlated at about .5 with mean school grades. This correlation is .4 after intelligence test scores are parcelled out. (Brookover et al. 1962) The relation of self-concept of academic ability to the individual's perceived expectations of significant others were correlated to about .5. These early findings have been replicated in various subsequent studies. The correlation between perceived expectations of parents, teachers, and peers in a large random sample of Michigan elementary students and self-concept of academic ability is slightly higher.

Our longitudinal study (Brookover et al. 1967) also revealed that the self-concept of ability scales changed significantly from year to year and that these changes were quite highly related to changes in perceived parental, friends and teachers evaluation of their ability as well as changes in student grades. We do not have similar data relevant to the predictive validity of the elementary or post-high school forms.

Both the theory and observation of changing self-concept of ability scores raises questions about the meaning of any estimate of the external reliability of the scale. Some would conclude that significant changes in scale scores is evidence that the scale is not reliable. Since we postulate that self-concept is a function of the perceived evaluations of significant others which may change both over time and the identification of the relevant others changes in scores are to be expected.

We have calculated the internal reliability of both the secondary and elementary school forms of the scale. The Hoyt coefficient of reliability for the secondary level self-concept scale were .82 for 8th grade males and .84 for 8th grade females. Guttman scale analysis indicates a reproducibility above .90 (Paterson 1966).

Analysis of the elementary form for 4-5 grade students in a statewide random sample indicated a Cronbach alpha of .79 and a .77 in a sub sample of students in predominantly black schools. The Guttman split half and the Spearman Brown reliability coefficients were both .82 in the statewide sample of 4-5 graders.

These data indicate that the internal consistency and split half figures are reasonably acceptable, but I reemphasize that they do not demonstrate that the scale measures a variable that is constant over time.

Finding that the correlation between school mean self-concept of academic ability and mean school achievement in a random sample of Michigan elementary schools is a significant negative, -.55 (Brookover 1979) raised some interesting questions about self-concept of academic ability. Why in spite of the consistent positive correlation of individual self-concept and individual achievement we find this very significant negative relationship between school means. Our further examination of this phenomena (Brookover and Passalacqua 1982) causes us to speculate that it was a function of student's peer reference group. The mean self-concept of academic ability of students in predominantly black schools was found to be significantly higher than the self-concept of students in predominantly white schools. Since the achievement of black students in Michigan and other places is significantly lower than white students, the negative correlation results in the random sample of schools. Presumably students in predominantly black schools when assessing their ability in comparison to their fellow students assess their own ability somewhat higher, while white students similarly may assess their ability somewhat lower.

The above and other findings have stimulated us to examine the nature of self-concept of academic ability as it relates to some aspects of school organization. We are here particularly interested in a characteristic of schools which we identified as the degree of differentiation in school programs. This variable is perceived as a measure of the degree to which the school differentiates between students through grouping or other practices that are presumably based upon the differences in ability to learn.

We found very little relationship between mean academic self-concept and the measure of school differentiation in any of our Michigan school samples. In the statewide random sample of all public elementary schools the correlation was .03. In the predominantly white school sample it was a -.17 and in the predominantly black school sample it was .12. These indicate of course little evidence that the degree of differentiation affects the mean level of self-concept in any of these Michigan school samples.

Recent discussions of the impact of grouping, tracking, and other patterns of differentiation among elementary and secondary school students, has led us to examine the question, Does the pattern of differentiation among students within schools significantly affect the variance in individual self-concept of ability within those schools?

Our analysis of the data from three samples of Michigan elementary schools does not support our speculation that greater differentiation is related to greater variance. The correlation between the standard deviation of self-concept of academic ability within schools is negatively correlated with the measure of differentiation at -.38 in the statewide random sample of 68 elementary schools. The results are essentially the same in the random sample of predominantly white schools, -.38. In the predominantly black school sample of 30 schools the correlation is .11. The latter correlation may result from the fact that there is relatively less differentiation within the black schools than is characteristic of the predominantly white schools. It may also reflect the possibility that the school staff's definition of the social structure and stratification is less relevant to students in black schools.

Our best guess at the explanation of the negative relationship between school differentiation among students and the variance in self-concept within each school, results from a reference group explanation of self-concept of academic ability. We do not have data on which to verify this explanation, but it seems possible that students who are placed in lower "ability" groups assess themselves relatively higher in reference to their group members than they would if they were placed in a heterogeneous groups. Similarly, those students placed in the "higher ability" groups, may assess themselves less able in comparison to their group members. The variance between the high and low group members would thus be somewhat lower than if all students were in undifferentiated ability groupings.

The reader may have other possible explanations of the findings in this analysis. If so we would appreciate some discussion about the alternate possibilities. This analysis, however, tends to give further evidence for the reference group variation in student's self-concept of academic ability. A previous study of special education students indicated similar results with students having higher self-concepts when placed in a special education class than they reported when they were transferred to a regular classroom (Brookover and Schurr 1967). Certainly these analyses indicate that self-concept of academic ability is not a constant but varies with the social situation and the expectations, evaluations that students perceive others hold for them.

REFERENCES

1. Brookover, W. B. Sociology of Education, American Book Company, 1955.

2. Brookover, W. B. "A Social-Psychological Conception of Classroom Learning", School and Society, February 1959.

3. Brookover, W. B., Ann Paterson and Shailer Thomas. Self-Concept of Ability and School Achievment I, Office of Research and Publication, Michigan State University, College of Education, East Lansing, MI 48824. Cooperative Research Project 845, 1962 ERIC File ED 002946.

4. Brookover, W. B. and David Gottlieb. Sociology of Education, 2nd Edition, American Book Company, New York, 1964.

5. Brookover, W. B. Ann Paterson, and Shailer Thomas. "Self-Concept of Ability and School Achievement", Sociology of Education, Vol. 37, No. 3, 1964.

6. Brookover, W. B., Edsel Erickson, and Lee Joiner. Self-Concept of Ability and School Achievement, III. College of Education, Michigan State University, East L p. 16.

7. Brookover, W. B. and Kenton Schurr. The Effect of Special Class Placement on the Self-Concept of Ability of the Educable Mentally Retarded Child. Educational Publication Services, Michigan State University, East Lansing, MI, 1967.

8. Brookover, W. B., et. al. School Social Systems and Student Achievement, So. Hadley, Mass: J. F. Bergin & Company, also distributed by Praeger Publishers, New York, 1979.

9. Brookover, W. B., and Joseph Passalacqua. "Comparison of Aggregate Self-Concepts for Populations with Different Reference Groups", in M. Lynch, A. Noren-Hebison and W. Buyen, Self-Concept: Advances in Theory and Practice, Cambridge, Massachusetts, Ballinger Press, 1982.

10. Brookover, W. B. "On Brookover, Paterson and Thomas Self-Concept of Ability and School Achievement", This Weeks Citation Classic, Citation Classics, Current Contents, No. 42, October 19, 1987, p. 16.

11. Paterson, Ann. An Evaluation of an Instrument Designed to Measure the Construct Self-Concept of (Academic) Ability. Ph.D. Thesis, Michigan State University, East Lansing, MI, 1966.

SELF-CONCEPT OF ABILITY SCALE

Form A: General

INSTRUCTIONS: Circle the letter in front of the statement which best answers each question.

1. How do you rate yourself in school ability compared with your close friends?

   A. I am the best
   B. I am above average
   C. I am average
   D. I am below average
   E. I am the poorest

2. How do you rate yourself in school ability compared with those in your class at school?

   A. I am among the best
   B. I am above average
   C. I am average
   D. I am below average
   E. I am among the poorest

3. Where do you think you would rank in your class in high school?

   A. Among the best
   B. Above average
   C. Average
   D. Below average
   E. Among the poorest

4. Do you think you have the ability to complete college?

   A. Yes, definitely
   B. Yes, probably
   C. Not sure either way
   D. Probably not
   E. No

5. Where do you think you would rank in your class in college?

   A. Among the best
   B. Above average
   C. Average
   D. Below average
   E. Among the poorest

6. In order to become a doctor, lawyer, or university professor, work beyond four years of college is necessary. How likely do you think it is that you would complete such advanced work?

   A. Very likely
   B. Somewhat likely
   C. Not sure either way
   D. Unlikely
   E. Most unlikely

7. Forget for a moment how others grade your work. In your own opinion, how good do you think your work is?

   A. My work is excellent
   B. My work is good
   C. My work is average
   D. My work is below average
   E. My work is much below average

8. What kinds of grades do you think you are capable of getting?

   A. Mostly A's
   B. Mostly B's
   C. Mostly C's
   D. Mostly D's
   E. Mostly E's

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SELF-CONCEPT OF ACADEMIC ABILITY SCALE
ELEMENTARY FORM

Wilbur B. Brookover

1. Think of your friends. Do you think you can do school work better, the same or poorer than your friends?

Better than all of them.....1
Better than most of them.....2
About the same.....3
Poorer than most of them.....4
Poorer than all of them.....5

2. Think of the students in your class. Do you think you can do school work better, the same or poorer than the students in your class?

Better than all of them.....1
Better than most of them.....2
About the same.....3
Poorer than most of them.....4
Poorer than all of them.....5

3. When you finish high school, do you think you will be one of the best students, about the same as most or below most of the students?

One of the best.....1
Better than most of the students.....2
Same as most of the students.....3
Below most of the students.....4
One of the worst.....5

4. Do you think you could finish college?

Yes, for sure.....1
Yes, probably.....2
Maybe.....3
No, probably not.....4
No, for sure.....5

5. If you went to college, do you think you would be one of the best students, same as most or below most of the students?

One of the best.....1
Better than most of the students.....2
Same as most of the students.....3
Below most of the students.....4
One of the worst.....5

6. If you want to be a doctor or a teacher, you need more than four years of college. Do you think you could do that?

Yes, for sure.....1
Yes, probably.....2
Maybe.....3
No, probably not.....4
No, for sure.....5

7. Forget how your teachers mark your work. How good do you think your own work is?

Excellent.....1
Good.....2
Same as most of the students.....3
Below most of the students.....4
Poor.....5

8. How good of a student do you think you can be in this school?

One of the best.....1
Better than most of the students.....2
Same as most of the students.....3
Below most of the students.....4
One of the worst.....5